

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関  
国際事務局



(43) 国際公開日  
2003 年 11 月 27 日 (27.11.2003)

PCT

(10) 国際公開番号  
WO 03/097634 A1

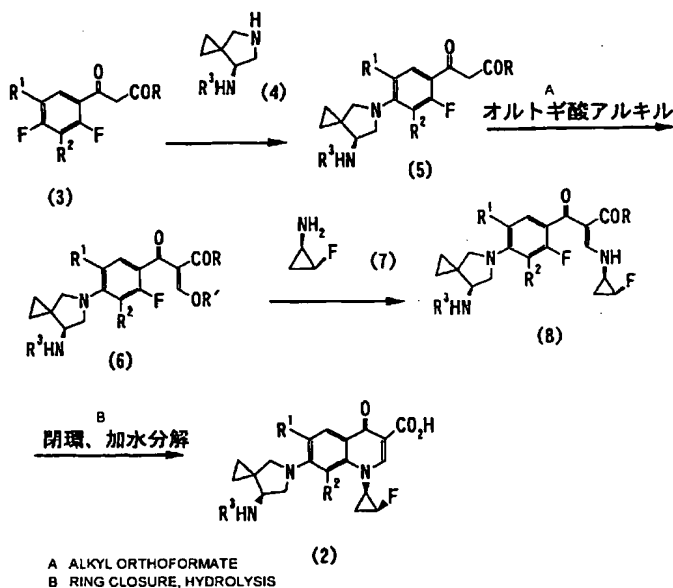
- (51) 国際特許分類: C07D 401/04, 209/54  
(21) 国際出願番号: PCT/JP03/06119  
(22) 国際出願日: 2003 年 5 月 16 日 (16.05.2003)  
(25) 国際出願の言語: 日本語  
(26) 国際公開の言語: 日本語  
(30) 優先権データ:  
特願2002-142383 2002 年 5 月 17 日 (17.05.2002) JP  
(71) 出願人 (米国を除く全ての指定国について): 第一製薬株式会社 (DAIICHI PHARMACEUTICAL CO., LTD.) [JP/JP]; 〒103-8234 東京都中央区日本橋 3 丁目 1 4 番 1 0 号 Tokyo (JP).  
(72) 発明者; および  
(75) 発明者/出願人 (米国についてのみ): 太田 直樹

- (OHTA, Naoki) [JP/JP]; 〒134-8630 東京都江戸川区北葛西 1 丁目 1 6-1 3 第一製薬株式会社東京研究開発センター内 Tokyo (JP). 秋葉 敏文 (AKIBA, Toshifumi) [JP/JP]; 〒134-8630 東京都江戸川区北葛西 1 丁目 1 6-1 3 第一製薬株式会社東京研究開発センター内 Tokyo (JP).  
(74) 代理人: 特許業務法人アルガ特許事務所 (THE PATENT CORPORATE BODY ARUGA PATENT OFFICE); 〒103-0013 東京都中央区日本橋人形町 1 丁目 3 番 6 号共同ビル Tokyo (JP).  
(81) 指定国 (国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[続葉有]

(54) Title: PROCESS FOR PRODUCING QUINOLONECARBOXYLIC ACID DERIVATIVE

(54) 発明の名称: キノロンカルボン酸誘導体の製造方法



(57) Abstract: A production process shown by the following reaction scheme. (4) (3)  $\rightarrow$  (5)  $\rightarrow$  (7) (6)  $\rightarrow$  (8)  $\rightarrow$  (2) By the process, a compound (2), which is useful as an antibacterial, can be produced at low cost in high yield.

[続葉有]

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/06119

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl<sup>7</sup> C07D401/04, 209/54

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
Int.Cl<sup>7</sup> C07D401/04, 209/54

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
CAPLUS, REGISTRY (STN)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2001-2676 A (DAIICHI SEIYAKU CO., LTD.), 09 January, 2001 (09.01.01), (Family: none)	1-49
Y	JP 2000-319261 A (DAIICHI SEIYAKU CO., LTD.), 21 November, 2000 (21.11.00), (Family: none)	1-49
Y	JP 8-198819 A (HOKURIKU PHARM.), 06 August, 1996 (06.08.96), (Family: none)	1-49
Y	EP 275971 A1 (KYORIN PHARM. CO., LTD.), 27 July, 1988 (27.07.88), & JP 63-179856 A & AU 8810639 A & CN 88100318 A	1-49

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
---	--

Date of the actual completion of the international search  
22 July, 2003 (22.07.03)

Date of mailing of the international search report  
12 August, 2003 (12.08.03)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/06119

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 247464 A1 (FIJISAWA PHARM. CO., LTD.), 02 December, 1987 (02.12.87), & AU 8773172 A & ZA 8703565 A & JP 63-2979 A	1-49
Y	EP 347851 A1 (SHIONOGI PHARM. CO., LTD.), 27 December, 1989 (27.12.89), & AU 8936080 A & JP 2-76875 A & US 5106854 A	1-49
Y	JP 5-117238 A (CHUGAI PHARM. CO., LTD.), 14 May, 1993 (14.05.93), (Family: none)	1-49
Y	JP 6-172345 A (SS PHARM., CO.), 21 June, 1994 (21.06.94), (Family: none)	1-49